In the human foot there are two springs but not with independent action. The outer spring is made up of the following bones: os calcis, cuboid, fourth and fifth metatarsals. The inner spring is made up of the os calcis, scaphoid, the three cuneiforms and the first three metatarsals, especially the first. In both cases the point of maximum convexity of the spring is supported by a tendinous sling whose upper attachment is to the bones of the leg. The peroneus longus is on the outer side, the tibialis posticus on the inner side.

Fractures of the Elbow in Children.—STONE (*Jour. Orthop. Surg.*, 1921, iii, 395) says that reduction should be attempted with the elbow fully extended if necessary. The elbow is then held flexed midway between pronation and supination by strapping the wrist to the shoulder with adhesive plaster and adding the support of a sling. The flexed position should be maintained for two weeks. Then a change to a right-angled splint for at least three weeks then, finally, a sling for a week as a safeguard against accident before natural use in play. Passive movement is either useless or harmful, or not only the synovial cartilage but the large masses of epiphyseal cartilage tend to prevent rought jagged ends from traumatizing the delicate synovial membrane. The two causes of limitation of motion after elbow fracture in children are spasm and deformity. Spasm indicates one thing, that motion would cause pain—nature demands rest till spasm is gone. In deformity the limitation is clean-cut—definite, comparable to the stopping of a door by an obstruction. Primarily the deformity is bony, in part the result of imperfect reposition of the fragments, in part of callus formation. Secondarily there may be all sorts of ligamentous and muscular readjustments which limit motion. In overcoming deformity the decrease in the size of the callus, the gradual absorption of bony projections and adaptive changes are the essential factors. One group of cases requires open reduction, namely, those in which the epiphysis of the external condyle has been detached and has turned turtle. The slightly concave fractured surface points upward, outward and backward. The articular surface lies in contact with the fracture line at the lower end of the shaft. In epiphyseal separations about the elbow joint the rœntgen-ray may often be wholly negative. The diagnosis must be made by history, the disturbed function and local tenderness. Volkmann's ischemic contracture is one of the most serious and distressing complications of elbow fractures. Any muscle deprived of its blood supply for a period of six hours undergoes degenerative changes from complicated muscle cell to low-grade scar tissue. Contraction of the scar causes flexion of the muscles.

Reconstructive Surgery of Traumatic Foot and Ankle Deformities.—COTTON (*Jour. Orthop. Surg.*, 1921, iii, 196) says that the functions of the foot in order of their importance are to support the body weight, to give attachment to the muscles of the legs and foot, to act as a lever in progression, to furnish the spring movements in walking by permitting lateral and up-and-down movements. Traumatic deformities of the foot and ankle which interfere with the normal function may be caused by injury or infection of the bones of the leg or ankle joint, bones and joints of the tarsus; injury or infection of the muscles or tendons, injury to nerves supplying motor function to muscles of the leg and foot. The most common cause of traumatic weak foot is unreduced Pott's fracture —the most common variety is fracture of the fibula about three inches above the external malleolus. This type when unreduced gives us the typical traumatic flat foot. It is necessary to restore the alignment of the foot to the leg, to put the foot back in gear with the leg. This can be brought about by osteotomy of the tibia and fibula above the old fracture or by refracturing the bones at the site of the old fracture. Another type of deformity is due to unreduced fracture of the lower end of the tibia extending into the ankle joint an acquired talipes equinovarus. The simplest method of treatment is by tenotomy of the tendo Achillis and other resisting tendons or fascia and wrenching, combined with osteotomy of the tibia and fibula above the ankle joint. Another common cause of deformity and prolonged disability of the foot is fracture of the os calcis. The lateral deformity of the fracture with the shortening of the tissues on the outer side of the ankle and of the peroneal tendons furnishes the pathology for the clinical condition of rigid weak foot. The prophylactic treatment is the reduction of the fractured os calcis by manipulation with furnishing of proper support to the foot when weight-bearing is begun. When the condition has developed the treatment is practically the same as that of rigid weak foot. The principles used in the treatment of osteomyelitis with deformity are, first, the thorough operative removal of the diseased bone by the cone method with correction of the deformity by osteotomy, followed by frequent cleansing of the wound and prevention of pocketing. The weight-bearing function is the first object of all treatment. Unnecessary risks and fanciful operations should be tabooed.

Non-operative Treatment of Scoliosis.—TRASLOW (*Jour. Orthop. Surg.*, 1921, iii, 228) says that successful treatment of structural scoliosis must depend upon a clear understanding of the elements of deformity and the lessening, if not complete elimination, of all of them. Uniform and regular measurement and numerical record of the elements of deformity are important as guides to continuance of treatment and as indicating elements most needing correction. A balanced use of corrective plaster-of-Paris jackets, of retention braces and of internal exercises is essential in satisfactory results. The position of the patient when the plaster jacket is applied is responsible for improving body posture and shoulder carriage; the successive paddings are for care of the spinal deviation and rotation. The essentials of a retention brace are ability to hold correction attained, application by the patient with reasonable accuracy, extensibility and lateral compressibility to meet normal growth and progressive deformity decrease; mechanical self-correction by the brace seems possible but not yet fully attained. Gymnastic exercises must be progressive, intensive and with a minimum of erect weight-bearing. They must aim to correct all of the elements of deformity, especially that of rotation. Starting positions other than standing facilitate these ends. Retention of deformity correction attained must be maintained while exercise is developing natural muscular support. Artificial support may gradually give way to natural support. The paralytic scoliotic must receive a larger proportion of artificial support than will be required for those not paralyzed in trunk muscles. Internal splinting by operative bone fixation may also be necessary in severe paralytic cases.